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Patent Office
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I, CASSANDRA RICHARDS, ACTING TEAM LEADER EXAMINATION SUPPORT & SALES hereby certify that annexed is a true copy of the Provisional specification in connection with Application No. PQ 4889 for a patent by UNICOMP SOLUTIONS PTY LTD and DARREN MATTHEW GEROS filed on 24 December 1999.

WITNESS my hand this
Eighteenth day of January 2001

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ORIGINAL

COMMONWEALTH OF AUSTRALIA

Patents Act 1990

PROVISIONAL SPECIFICATION FOR THE INVENTION ENTITLED:-

SECURE DELIVERY SYSTEM

The invention is described in the following statement:

SECURE DELIVERY SYSTEM

The present invention relates to a secure delivery system for mail, packages and articles as well as apparatus necessary to perform such secure delivery system.

For many years mail has been utilised to deliver letters, documents and packages although there is general recognition in more recent times that this system is only capable of providing very low security. To this end insured mail deliveries and various forms of certified mail delivery with signatures required from the addressee have been devised although the system still lacks the security necessary in the modern age. Courier deliveries have become more popular and generally a signature is required in order to accept a courier delivery. Where the addressee is a home address however a signature can often not be obtained having regard to the fact that many households now contain two working partners who are away from the premises during daylight and hence most business hours.

The advent of E-commerce has further accentuated the poor security associated with existing mail delivery systems and has inhibited the growth of E-commerce. The nature of E-commerce is that a product may be purchased over the worldwide web but the product must still be physically delivered to the addressee. It is essential to the E-commerce merchant that receipt of the contracted articles can be confirmed. Due to

the abovementioned limitations of courier mail deliveries particularly to residential addresses such confirmation is not always possible. If a signature is required for the delivery and the premises is unattended then additional cost is incurred whilst trying to effect delivery at a alternative time. Signatures are also open to fraudulent manipulation particularly as the delivery person often has no signature with which to compare the signature which he or she may receive when delivering an article.

It is consequently an object of the present invention to provide a delivery system and associated apparatus which ameliorates one or more of the abovementioned security difficulties with existing systems or at least provides the market with an alternative.

According to the present invention there is disclosed a delivery system involving an addressor and an addressee wherein the addressee's premises are provided with a delivery box accessible from the street which delivery box is provided with electronic storage and communication means capable of receiving and storing coded messages via wired or wireless means; a unique identifier associated with each addressee's delivery box; microprocessor means in communication with the communication and storage means and being linked to an input device adapted to control access to the delivery box; means under the control of the addressor adapted to generate a unique code associated with each article intended to be despatched by the addressor; wired or wireless means for

communication of such unique access code from the addressor to the storage and communication device associated with the addressee's delivery box; the communication and storage means being capable of recording the fact that a particular input code has been input to the delivery box to facilitate opening thereof and transmitting a confirmation message to the addressor associated with the unique code so as to confirm delivery of the article associated with the unique code.

According to another aspect of the present invention there is disclosed a lockable delivery box adapted to be placed on the outside of a premises in a street accessible position; an input device associated with the locking mechanism of the box adapted to receive coded data to facilitate opening of the device; electronic storage and communication means associated with the delivery box capable of receiving and storing such coded data from a remote location; log means adapted to record opening of the box and the code utilised to open the box; the communication means being interfaced with the input , log or storage means such that confirmation of use of an access code may be transmitted to the originator of the access code; power supply means associated with the electronic storage and communication means.

One embodiment of the present invention will now be described with the assistance of figures 1 and 2 hereof; figures 1 and 2 comprising a flow diagram associated with the system of the present invention.

A delivery system in accordance with the present invention may function as depicted in the flow diagram of figures 1 and 2.

As depicted in Figure 1 a customer would firstly order goods either by contacting a web page or otherwise communicating with a mail order type goods supplier. The goods and price would be identified in the normal way and the customer (addressee) would be asked whether they had a delivery box in accordance with the present invention, hereinafter referred to as "E-box". If the answer was "no" then the customer would be referred to a mechanism whereby an E-box could be purchased and installed whereas if the E-box was available the customer would be asked to identify their E-box by giving a unique E-box number.

The addressee would then be prompted to give their E-box identifier (number). Confirmation of the proposed purchase details including address, E-box number, telephone number etc. would then be presented to the customer who would then confirm whether or not these details were correct. If the details were not correct then they could be changed. If the details are correct then the retailer's (addressor's) system would generate a delivery code unique to that particular transaction and associated with the nominated E-box of the consumer. In addition to generating this delivery code the addressor's system would transmit electronically the delivery code to the E-box of the addressee and also to the delivery company

responsible for physically delivering the goods to the E-box at the addressee's premises.

With reference now to figure 2 when the courier physically delivering the purchased goods to the addressee's E-box arrives at the E-box access door outside the addressee's premises the delivery courier would input the unique delivery code to the E-box by way of the E-box security system input device.

The E-box input security device may comprise a keypad adapted to receive a number or alternatively it may comprise a scanner capable of reading a swipe card.

If the correct code is input to the input device then access to the interior of the delivery box is available to the courier and the item to be delivered may be placed in the delivery box. The delivery box is then closed and is then rendered inaccessible unless a fresh authorised access code is input to the security system associated with the box.

The box must have an electronic communication device associated therewith capable of receiving and storing unique access codes from the components of the system associated with the addressor and furthermore capable of controlling the access to the box in response to inputs to the access controlling security device. A power supply needs to be provided

for the box as well as a telephone line to facilitate communication or alternatively a transmitter and receiver in order to facilitate wireless transmissions. When the box is opened in response to entry of a security code to the access controlling security device the time, date and access code utilised are recorded in an electronic storage device associated with the E-box. The duration of opening of the box may also be recorded for security purposes. This information is then transmitted to the originator of the access code either directly or via a central E-box information system.

An e-mail may then be sent to the addressee notifying them that the delivery has arrived.

In the event that an E-box central system is being utilised the E-box central delivery system provides to the retailer and delivery company confirmation that the delivery has occurred either immediately or on an agreed schedule basis. The retailer and delivery company may then reconcile these confirmations with their records.

The addressee at some point then opens the E-box to remove the delivery. This accessing of the E-box is in response to entry by the customer of the addressee's access code and this accessing of the E-box is similarly logged by the E-box and may be transmitted by the communication and storage device in the E-box to the central E-box system so that the addressor

(retailer) may reconcile this information with its records to eliminate any doubt as to whether the delivery was actually received.

E-boxes may be tailored to specific addressee's requirements insofar as size, appearance, mounting facilities and weatherproofing are concerned. For example where detached residential premises are involved the E-box may be mounted on a post near a driveway entrance adjacent the street. It would obviously need to be weatherproof and of sufficient size to accommodate the largest contemplated delivery. If the E-box were placed at a great distance from the nearest telephone access point then it may need to be provided with a transmitter and receiver capable of transmitting and receiving coded information. If telephone lines pass adjacent the entry to the property however it would be a simple matter to wire the E-box to the telephone line, possibly without even running a line from the premises to the street. In the case of non-detached residential premises or business premises however the E-box may be conveniently recessed in a wall in which case the length of wiring required would be far less than in a detached residential situation and furthermore weatherproofing measures may not be necessary.

It should be appreciated that the delivery system and E-box in accordance with the present invention are not restricted to delivery of articles purchased by way of E-commerce but may be utilised by business for correspondence or documents in relation to which there is a security

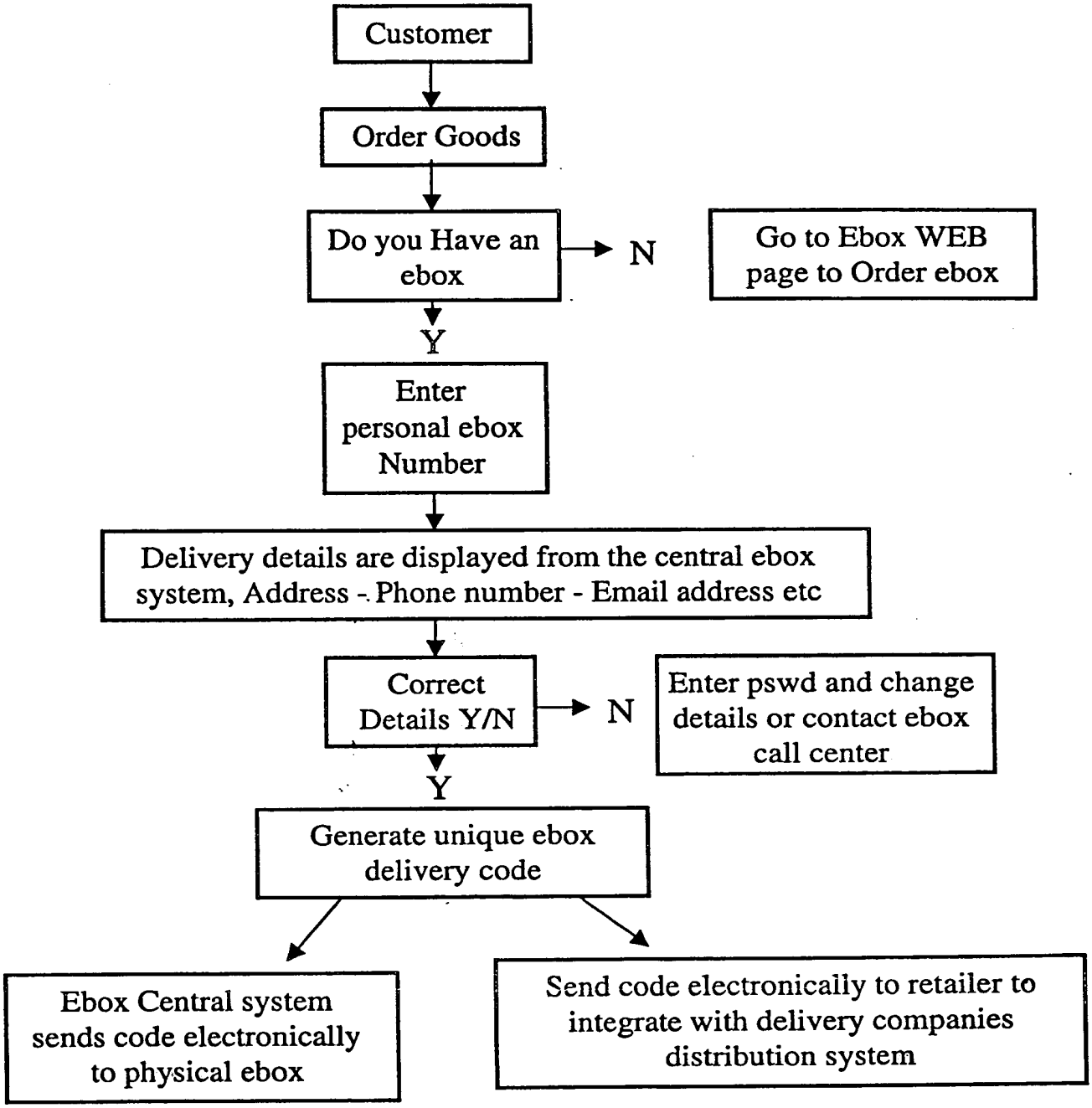
requirement or indeed conventional "mail order" or other delivery situations.

It will also be appreciated that alternate embodiments of the present system and E-box may be devised apart from those above described without departing from the scope and intendment of the present invention.

DATED this 22nd day of December 1999.

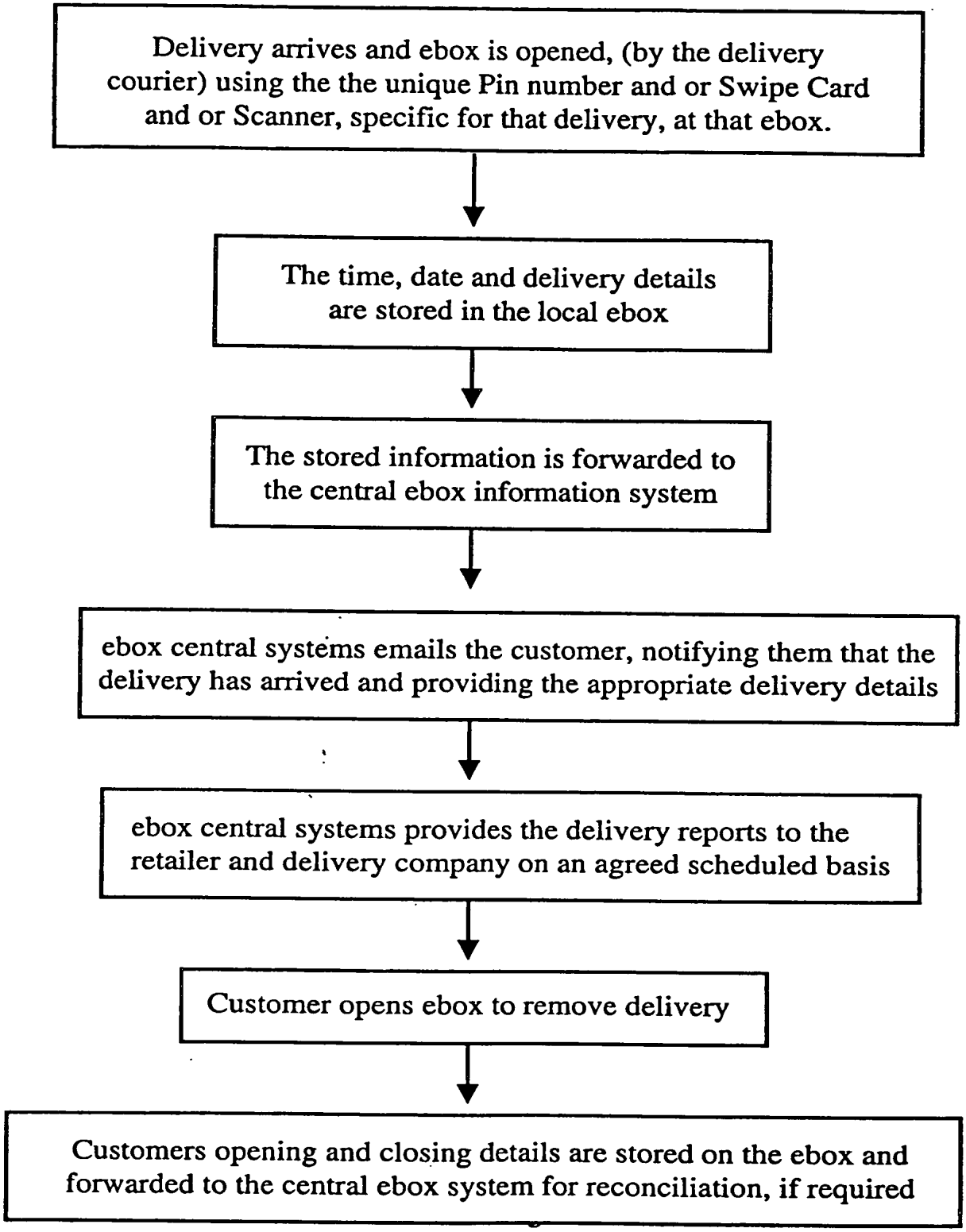
UNICOMP SOLUTIONS PTY LTD
and DARREN MATTHEW GEROS
by their Patent Attorneys
Barker Blenkinship & Associates

FIG I



Business Flow Diagram for Ebox

FIG 2


Delivery arrives and ebox is opened, (by the delivery courier) using the the unique Pin number and or Swipe Card and or Scanner, specific for that delivery, at that ebox.
The time, date and delivery details are stored in the local ebox
The stored information is forwarded to the central ebox information system
ebox central systems emails the customer, notifying them that the delivery has arrived and providing the appropriate delivery details
ebox central systems provides the delivery reports to the retailer and delivery company on an agreed scheduled basis
Customer opens ebox to remove delivery
Customers opening and closing details are stored on the ebox and forwarded to the central ebox system for reconciliation, if required